



New England Section

September Dinner Meeting Announcement

When: Tuesday September 13, 2016
5:30 – 6:30 Social Hour
6:30 – 7:30 Dinner
7:30 – 8:30 Presentation & Discussion

Where: **110 Grill, 116 Chelmsford Street
Chelmsford, MA 01824
978.256.2777**

Speaker: Dr. Jonathan Kenny
Professor of Chemistry
Tufts University

Title: **Using Multidimensional Fluorescence Spectroscopy to Address Problems in Analytical and Physical Chemistry**

Abstract:

Recently we have been developing methodologies for investigating complex chemical samples using multidimensional fluorescence spectroscopy with chemometric methods of data analysis. Primarily using parallel factor analysis (PARAFAC), we have addressed the measurement of equilibrium constants for complexation and determination of approximate fluorescence lifetimes of individual components in mixtures of aromatic molecules. We have also investigated fundamental issues in fluorescence spectroscopy, such as nitrogen purging of organic solvents and correction for inner filter effects in highly opaque (Optical density > 5) samples. These improvements should allow a more thorough investigation of issues such as energy transfer which inhibit the interpretation of fluorescence signals from highly complex samples such as humic materials and petroleum products.

Speaker biography:

Jonathan Kenny received his B.S. in Chemistry in 1975 from the University of Notre Dame, and his Ph.D. in Physical Chemistry in 1979 from the University of Chicago, working with his advisor,

Donald H. Levy, on a thesis entitled “Free-Jet Spectroscopy of van der Waals Molecules: Complexes of Iodine with Helium, Neon and Hydrogen”. He spent two years at Wesleyan University as a Postdoctoral Fellow with Bryan Kohler. A faculty member at the Department of Chemistry at Tufts University in Medford, Massachusetts since 1981, Professor Kenny’s research program includes fundamental physical chemistry (photophysics of aromatic systems) and applied spectroscopy. He has been involved in environmental education for over twenty years, including workshops for faculty (the Tufts Environmental Literacy Institute) and courses for students (e.g., Environmental Chemistry, a course for nonscientists). His research involves the use of multidimensional fluorescence spectroscopy for environmental applications as well as fundamental studies. He was recently awarded a grant by the *Tufts Innovates* program of the provost’s office to develop a new interdisciplinary course in climate justice. IN 2012, the Environmental Chemistry division of the American Chemical Society presented him with its Lectureship Award for his talk describing the course, “Telling the Climate Justice Story.”

Dinner Details: Attendees will be ordering and paying for their own meals from the restaurant menu. Please RSVP to Mary Kate Donais at mdonais@anselm.edu so that we can be sure of a headcount and the room’s physical arrangement for the talk.

Cost: SAS Members \$5; non-members \$7; full time students and unemployed members \$5. Please try to have a check or exact change.

Contact: We need to know if you are coming ahead of time. Please contact Mary Kate Donais at mdonais@anselm.edu to make a reservation.

Directions to the **110 Grille, 116 Chelmsford Street**
Chelmsford, MA 01824

In Chelmsford at Exit 34, Route 110 off I-495. Chelmsford Street is Route 110. 110 Grille is just past the turn for the Radisson on the right.

